

## CLAIMS

1. A fixed-bed multitubular reactor, comprising:

a plurality of reaction tubes to be packed with a catalyst; and

5 catalyst temperature measurers equipped to measure the temperature near the center part in the radial direction of the reaction tubes, the catalyst temperature measurers being installed in each of a part or all of the plurality of the reaction tubes, the measurement positions thereof being different from each other in the longitudinal direction of the reaction tubes.

10 2. The fixed-bed multitubular reactor according to claim 1, wherein the catalyst temperature measurers are equipped in 5 to 35 tubes out of a reaction tube group comprising 5 to 105 reaction tubes adjacent to each other.

15 3. The fixed-bed multitubular reactor according to claim 2, wherein a plurality of the reaction tube groups are provided and allocated to the portions where a flow pattern of a heat medium flowing outside the reaction tubes of each reaction tube groups is different.

20 4. The fixed-bed multitubular reactor according to claim 1, wherein the reactor is for a gas-phase catalytic oxidation reaction.

5. The fixed-bed multitubular reactor according to claim 4, wherein the gas-phase catalytic oxidation reaction is a reaction synthesizing an unsaturated aldehyde or an unsaturated carboxylic acid from propylene, isobutylene or tertiary butyl alcohol.

6. The fixed-bed multitubular reactor according to claim 4, wherein the gas-phase catalytic oxidation reaction is a reaction synthesizing an unsaturated carboxylic acid from an unsaturated aldehyde.